

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant(s):** Rudolf Maarten Bolle  
Chitra Dorai  
Nalini K. Ratha

**Docket No.:** YOR919990588US2

**Serial No.:** Unassigned

**Filing Date:** Concurrently Herewith

**Title:** **SYSTEM AND METHOD FOR DISTORTION CHARACTERIZATION IN  
FINGERPRINT AND PALM-PRINT IMAGE SEQUENCES AND USING  
THIS DISTORTION AS A BEHAVIORAL BIOMETRICS**

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**INFORMATION DISCLOSURE STATEMENT**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, Applicant's attorney wishes to bring to the attention of the Patent and Trademark Office the following document(s) listed on the accompanying PTO Form 1449. Copies of non-patent documents can be provided upon Examiner's request.

**U.S. Patent Documents**

1. U.S. Patent No. 5,933,515
2. U.S. Patent No. 6,323,846
3. U.S. Patent No. 6,388,657
4. U.S. Patent No. 6,466,686
5. U.S. Patent No. 6,487,306

**Other Documents**

6. Bergen et al., "Hierarchical Model-Based Motion Estimation," pgs. 237, 251 (May 1992).
7. Dorai et al., "Extracting Motion Annotations from MPEG-2 Compressed Video for HDTV Content Management Applications," International Conference on Multimedia Computing and Systems, June 7-11, 1999, Florence Italy, IEEE Multimedia Systems '99, Vol. 1, pgs. 673-678 (1999).

8. Haskell et al., "Digital Video: An Introduction to MPEG-2," Motion Compensation Modes in MPEG, Chapter 7, pgs. 146-155 (1997).
9. Nalwa, V.S., "Automatic On-Line Signature Verification," Proceedings of the IEEE, Vol. 85, No. 2, pgs. 215-239 (February 1997).
10. Ratha et al., "Adaptive Flow Orientation-Based Feature Extraction in Fingerprint Images," Pattern Recognition, Vol. 28, No. 11, pgs. 1657-1672 (1995).
11. Ratha et al., "A Real-Time Matching System for Large Fingerprint Database," IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 18, No. 8, pgs. 799-813 (1996).

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made, or as an admission that the information cited is considered to be material to patentability or that no other material information exists.

Respectfully submitted,



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**LIST OF PUBLICATIONS FOR  
 APPLICANT'S INFORMATION  
 DISCLOSURE STATEMENT**

**U.S. PATENT DOCUMENTS**

EXAMINER					FILING DATE
INITIAL	DOCUMENT NO.	DATE	NAME	CLASS/SUBCLASS	IF APPROPRIATE
_____	5,933,515	08/03/99	Pu et al.		
_____	6,323,846	11/01	Westerman et al.	345/173	
_____	6,388,657	05/02	Natoli et al.	345/168	
_____	6,466,686	10/02	Senior, Andrew William	382/124	
_____	6,487,306	11/02	Jain et al.	382/125	

**FOREIGN PATENT DOCUMENTS**

EXAMINER					TRANSLATION	
INITIAL	DOCUMENT NO.	DATE	COUNTRY	CLASS/SUBCLASS	YES	NO

**OTHER DOCUMENTS**

EXAMINER		REF NO.	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
_____			Bergen et al., "Hierarchical Model-Based Motion Estimation," pgs. 237, 251 (May 1992).
_____			Dorai et al., "Extracting Motion Annotations from MPEG-2 Compressed Video for HDTV Content Management Applications," International Conference on Multimedia Computing and Systems, June 7-11, 1999, Florence Italy, IEEE Multimedia Systems '99, Vol. 1, pgs. 673-678 (1999).
_____			Haskell et al., "Digital Video: An Introduction to MPEG-2," Motion Compensation Modes in MPEG, Chapter 7, pgs. 146-155 (1997).
_____			Nalwa, V.S., "Automatic On-Line Signature Verification," Proceedings of the IEEE, Vol. 85, No. 2, pgs. 215-239 (February 1997).
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Examiner

Date Considered

**Examiner:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.